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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVE., N.W. WASHINGTON, DC 20005				
			EXAMINER LAYE, JADE O	
			ART UNIT 2617	PAPER NUMBER

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,671

Applicant(s)

DENNEY ET AL.

Examiner

Jade O. Laye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/21/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

I. The information disclosure statement (IDS) submitted on 5/21/05 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Claim Objections

II. Claims 10 and 11 are objected to because of the following informalities:

- a. Claim 10 appears to contain a typo in the phrase "...to a master interface to a remote communications device."
- b. Claim 11 also appears to contain a typo in the phrase "...the role of a source downstream source..."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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III. Claims 1-5, 7, 8, 14, 18, 20, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by *Burroughs et al.* (US Pat. Pub. No. 2002/0144284).

As to Claim 1, *Burroughs et al* disclose a data-over-cable system comprising various CMTS stations, which communicate with each other via a bidirectional path (therefore, at any given time, any CMTS can be downstream from another). In the event that one CMTS fails, another backup CMTS will takeover communications. The necessary synchronization data (i.e., bandwidth allocation message, upstream channel description, etc.) is sent from the failing CMTS (which could be downstream) or a cable modem (which also could be downstream). Once received by the backup CMTS, each system component (CMTS and modem) will perform checks on the other (i.e., authenticate bandwidth allocation message) –including MAP checks. If the checks are successful, data transfer begins. (Abstract; Pars. [0007, 0009, 0025, 0028, 0029, 0031, 0033, 0034, & 0038]). Moreover, it is inherent the MAP message be used to predict the arrival of data (as discussed by Applicant on Page 2 of Spec.). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 1.

Claim 17 is encompassed within the rejection of Claim 1. Thus, it is analyzed and rejected as previously discussed.

As to Claim 2, the transmission of a MAP message is inherent when a failing CMTS transmits the synchronizing data to the backup CMTS. In order for the backup to operate properly, it must be informed as to the downstream and corresponding upstream channel descriptors. Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 2.

As to Claim 3, *Burroughs* further teaches the CMTS units are in bidirectional communication with each other. (inherently disclosed in citations of Claim 1). Therefore, at

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any given time, any CMTS can be downstream from another. Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 3.

The limitations of Claim 4 are encompassed within the rejection of Claim 1. Thus, it is analyzed and rejected as discussed therein.

The limitations of Claim 5 are encompassed within the rejection of Claim 1. Thus, it is analyzed and rejected as discussed therein.

As to Claim 7, it is inherent the system determine the source of the bandwidth allocation message because each CMTS and modem will have some form of location ID. As discussed under Claim 1, a MAP contains an upstream channel descriptor and this same info (i.e., synch info) is used when the backup CMTS and cable modem perform checks on each other. Moreover, during this synchronization process, it is inherent that some form of access/authority check be performed. Therefore, the MAP, which facilitates the entire process, supplies a channel descriptor, which in turn is used to perform the access/authority check. Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 7.

As to Claim 8, *Burroughs* further teaches the modem will reject the synch data if it is not valid (i.e., authenticated). (Fig. 2). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 8.

The limitations of Claim 9 are encompassed within the limitations of Claims 1 and 7. Moreover, since any number of modems can communicate with any given CMTS, said CMTS can receive any number of bandwidth allocation messages from the downstream modems. Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 9.

As to Claim 10, *Burroughs* further teaches the bandwidth allocation messages are sent to a remote communications device (i.e., could also be interpreted as a master interface). (citations of Claim 1). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 10.

As to Claim 11, *Burroughs* further teaches the backup CMTS can receive synch data from the failing CMTS. Therefore, this will modify the role of the backup CMTS from idle to active and give it the authority to manage the upstream channel. (citations of Claim 1). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 11.

As to Claim 12, *Burroughs* further discloses that during the system checks between the CMTS and modem, the power level can be adjusted. (Par. [0034 & 0035]). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 12.

As to Claim 13, it is inherent the operations of *Burroughs* are performed in real-time. (citations of Claim 1). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 13.

In light of the rejection of Claim 1, the limitations of Claim 14 are inherent. In any data-over-cable system, the cable modem must communicate some form of bandwidth request during initialization procedures, thus the CMTS must have some form of filter to receive said request. During this process, the modem will be authenticated and an upstream channel will be designated. Moreover, when the CMTS receives bandwidth requests from various modems, it must store those in order to facilitate data transfer. In order to accurately store those requests, it must first decipher the data into components that can be analyzed (i.e., parsed). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 14.

The limitations of Claim 16 are inherently disclosed. When the CMTS receives bandwidth requests from various modems, it must store those in order to facilitate data transfer.

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In order to accurately store those requests, it must first decipher the data into components that can be analyzed (i.e., parsed). Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 16.

The limitations of Claim 18 are also inherent in light of the rejection of Claim 1. As previously discussed, during initialization procedures, bandwidth and upstream channels are allocated. Since any one CMTS can service multiple downstream modems, it is inherent the CMTS have some form of memory used to store each modems respective bandwidth allocation and upstream channel. Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 18.

As to Claim 20, it is inherent the CMTS have some form of memory used to identify which CMTS is available as a backup. Moreover, since the system operates in real-time, whenever a CMTS fails, the parameters of the backup CMTS must be updated to mirror those of the failing CMTS. Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 20.

As to Claim 21, it is inherent the CMTS and modem have a MAP extractor in order to decode the transmitted MAP. Accordingly, *Burroughs et al* anticipate each and every limitation of Claim 21.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

IV. Claims 6, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Burroughs et al* in view of *Hebsgaard et al.* (WO 01/17167).

Claim 6 recites the method of Claim 1, further comprising limitations which will not be recited here (however, each will be addressed in turn). As discussed above, *Burroughs et al* anticipate each and every limitation of Claim 1, but fail to disclose the limitations of Claim 6. However, within the same field of endeavor, *Hebsgaard et al* disclose a similar system which transmits control bits which are used to determine if the time-stamp is valid. (Pg. 7, Ln. 35-39). Accordingly, it would have been obvious to one having ordinary skill in this art at the time of

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Applicant's invention to combine the systems of *Burroughs* and *Hebsgaard* in order to provide an efficient method of determining whether the transmitted MAP info is valid.

Claim 19 corresponds to Claim 6. Thus, it is analyzed and rejected as previously discussed.

Claim 15 recites the system of Claim 14, further comprising limitations which will not be recited herein, but each will be addressed in turn. As discussed above, *Burroughs et al* anticipate each and every limitation of Claim 14, and further inherently discloses the use of a filter which receives the bandwidth allocation info from a downstream source (in order to receive the info transmitted on some radio frequency, it must have some form of filter). But, *Burroughs* fails to teach the system communicates over a slave interface. However, *Hebsgaard et al* disclose such a set up. (Abstract; Fig. 3). Accordingly, it would have been obvious to one having ordinary skill in this art at the time of Applicant's invention to combine the systems of *Burroughs* and *Hebsgaard* in order to provide an efficient method of synchronizing various CMTS stations.

Conclusion

V. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. *White et al* (US Pat. Pub. No. 2002/0038461) disclose a tiered CMTS system.
- b. *Daruwalla et al* (US Pat. No. 6,839,829) disclose a tiered CMTS system.
- c. *Sawyer et al* (US Pat. No. 6,765,925) disclose a tiered CMTS system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jade O. Laye whose telephone number is (571) 272-7303. The examiner can normally be reached on Mon. 7:30am-4, Tues. 7:30-2, W-Fri. 7:30-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: Jade O. Laye
December 2, 2005.



VIVEK SRIVASTAVA
PRIMARY EXAMINER